



# ICAO ENGINE EXHAUST EMISSIONS DATA SHEET

## SUBSONIC ENGINES

ENGINE IDENTIFICATION: AE3007A3  
 UNIQUE ID NUMBER: 6AL018  
 COMBUSTOR: Type 2  
 ENGINE TYPE: MTF

BYPASS RATIO: 4.7  
 PRESSURE RATIO ( $\pi_{oo}$ ): 17.2  
 RATED THRUST ( $F_{oo}$ ) (kN): 33.0

### REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NO <sub>x</sub>	SMOKE NUMBER
D <sub>p</sub> /F <sub>oo</sub> (g/kN) or SN	18.7	92.5	50.2	0.0
AS % OF ORIGINAL LIMIT	95.4	78.4	67.5	0.0
AS % OF CAEP/2 LIMIT (NO <sub>x</sub> )			84.3	
AS % OF CAEP/4 LIMIT (NO <sub>x</sub> )			86.2	
AS % OF CAEP/6 LIMIT (NO <sub>x</sub> )			87.1	
AS % OF CAEP/8 LIMIT (NO <sub>x</sub> )			92.8	

### DATA STATUS

- PRE-REGULATION  
 x CERTIFICATION  
 - REVISED (SEE REMARKS)

### TEST ENGINE STATUS

- NEWLY MANUFACTURED ENGINES  
 x DEDICATED ENGINES TO PRODUCTION STANDARD  
 - OTHER (SEE REMARKS)

### EMISSIONS STATUS

x DATA CORRECTED TO REFERENCE  
 (ANNEX 16 VOLUME II)

### CURRENT ENGINE STATUS

(IN PRODUCTION, IN SERVICE UNLESS OTHERWISE NOTED)  
 x OUT OF PRODUCTION (DATE: - )  
 - OUT OF SERVICE (DATE: - )

### MEASURED DATA

MODE	POWER SETTING (%F <sub>oo</sub> )	TIME (minutes)	FUEL FLOW (kg/s)	EMISSIONS INDICES (g/kg)			SMOKE NUMBER
				HC	CO	NO <sub>x</sub>	
TAKE-OFF	100	0.7	0.358	0.00	0.00	20.93	0.0
CLIMB OUT	85	2.2	0.300	0.00	0.00	18.27	0.0
APPROACH	30	4.0	0.108	0.23	2.00	6.56	0.0
IDLE	7	26.0	0.045	5.65	34.86	3.18	0.0
LTO TOTAL FUEL (kg) or EMISSIONS (g)			150	401	2488	1429	-
NUMBER OF ENGINES				1	1	1	1
NUMBER OF TESTS				3	3	3	3
AVERAGE D <sub>p</sub> /F <sub>oo</sub> (g/kN) or AVERAGE SN (MAX)				12.1	75.4	43.3	0.0
SIGMA (D <sub>p</sub> /F <sub>oo</sub> in g/kN, or SN)							
RANGE (D <sub>p</sub> /F <sub>oo</sub> in g/kN, or SN)							

### ACCESSORY LOADS

POWER EXTRACTION 0 (kW) AT - POWER SETTINGS  
 STAGE BLEED 0 (% CORE FLOW) AT - POWER SETTINGS

### ATMOSPHERIC CONDITIONS

BAROMETER (kPa)	99.6-99.7
TEMPERATURE (K)	297-301
ABS HUMIDITY (kg/kg)	0.0115-0.0141

### FUEL

SPEC	Jet A
H/C	1.9
AROM (%)	16-20

MANUFACTURER: Rolls-Royce Corporation  
 TEST ORGANIZATION: Rolls-Royce Corporation  
 TEST LOCATION: Indianapolis, Indiana  
 TEST DATES: 28/08/2002-29/08/2002

### REMARKS

- For effectivity see Rolls-Royce Notice to Operators No. AE3007A-076
- Data in this form for AE3007A3 engine fitted with PAB fuel nozzles
- Results based on Rolls-Royce report EDR 19972

Compliance with Fuel Venting requirements: - ('x' if complies, 'PR' if pre-regulation, '-' if information is not available)